REMARKS

Claims 1-2 and 4-9 are pending in the present application. Claim 1 is the only independent claim.

As a reminder, in the Office Action dated February 9, 2007, claims 1 and 5-9 remain rejected under 35 U.S.C. 103(a) as obvious over US 6,400,433 to Arakawa et al. ("Arakawa") in view of US 6,657,690 to Hashimoto ("Hashimoto") and further in view of US 6,773,766 to Meyer et al. ("Meyer"), claim 2 remains rejected under 35 U.S.C. 103(a) as obvious over Arakawa in view of Hashimoto and Meyer, and further in view of US 6,685,998 to Nishikawa et al. ("Nishikawa"), and claim 4 remains rejected under 35 U.S.C. 103(a) as obvious over Arakawa in view of Hashimoto and Meyer, and further in view of US 6,580483 to Suzuki et al. ("Suzuki").

It is alleged in the Office Action that there would have been a motivation to combine Arakawa and Hashimoto because Arakawa discloses "an optically compensating B-layer (element A) comprising a cholesteric liquid crystal layer" (see Office Action at page 3).

A Request for Reconsideration was filed on May 1, 2007, in which it was explained in particular that Arakawa fails to teach or suggest a cholesteric liquid crystal layer, so that there would have been no motivation to combine the references as alleged in the Office Action, and no combination of these references would have resulted in the presently claimed invention.

In the Advisory Action dated May 18, 2007, the Request for Reconsideration filed on May 1, 2007 is not deemed persuasive. It is alleged in the Advisory Action that the Arakawa

reference discloses a chiral discotic phase, and that such phase "is also known as discotic cholesteric phase," with reference to U.S. Patent No. 6,444,280 to Matsuoka et al., col. 2, lines 3-8 (see Advisory Action, continuation sheet).

Applicants urge reconsideration of the rejections. It is submitted that a single patent document mentioning a "discotic cholesteric" phase does not establish a conventional definition of the term "cholesteric," and in any case, the reference to the expression "discotic cholesteric" does not support the rejections because there is no suggestion in the cited references or in the general knowledge in the art for replacing a "chiral discotic" (or "discotic cholesteric") phase as in Arakawa by a "chiral nematic" (or "cholesteric") phase as in Meyer.

First, it is submitted that the use of the term "discotic cholesteric" with respect to a "chiral discotic" phase is not conventional, because the conventional definition of "cholesteric" involves "elongated molecules" or "nematic phase."

For example, as shown in the attached excerpt, the McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth Ed. (2003) defines "cholesteric material" and "cholesteric phase" as follows:

- "cholesteric material": "A liquid crystal material in which the elongated molecules are parallel to each other within the plane of a layer, but the direction of orientation is twisted slightly form layer to layer to form a helix through the layers"
- "cholesteric phase": "A form of the nematic phase of a liquid crystal in which the molecules are spiral"

Also, in U.S. 6,773,766 to Meyer, which is cited in the rejections as allegedly disclosing a compound of formula (10), the term "cholesteric phase" is defined according to the conventional meaning: "If a nematic phase of this type comprises chiral compounds, a so-called cholesteric phase forms, which is characterized by a helical superstructure of the longitudinal axes of the molecules" (Meyer at col. 1, lines 29-31).

Thus, it is submitted that the expression "discotic cholesteric" phase in the Matsuoka patent to which reference is made in the Advisory Action is a particularized expression of this document to describe its discotic phases, but such discotic phases are not encompassed by the conventional meaning of the expression "cholesteric" phase.

In any case, in the context of the presently claimed invention, it is submitted that "cholesteric" clearly means "chiral nematic." More specifically, it is submitted that no reasonable interpretation of the term "cholesteric" in the present claims could be expanded to include a "chiral discotic" phase, because the cholesteric layer of the presently claimed invention is formed from the monomer of formula (10) as recited in present claim 1.

The difference between a "chiral discotic" phase and a "chiral nematic" ("cholesteric") phase is illustrated in the schematic comparative drawing attached to this paper. This figure shows schematically the structure of a chiral discotic liquid crystal phase (left side of the figure) and the structure of a cholesteric liquid crystal phase (right side of the figure, illustrated with a group of cross-sectional views to make the continuous spiral structure apparent). The attached figure illustrates the significant differences between these two liquid crystal structures.

Thus, even if, arguendo, a "chiral discotic" layer of Arakawa could be called a "discotic cholesteric" layer, this is still a very different structure from a "chiral nematic" or "cholesteric" layer as in the Meyer reference and in the presently claimed invention, so that the person of ordinary skill in the art would not have found any indication of whether or how to replace the "chiral discotic" layers of Arakawa by "chiral nematic" layers as in Meyer, and would not have been able to form any reasonable expectation of success in doing so.

In summary, there would have been no motivation to combine the cited references as alleged in the Office Action, and any combination of the cited references would not have taught or suggested the presently claimed invention or its advantages.

In addition, both Arakawa and Hashimoto are silent regarding a laminate of an optically biaxial film and a cholesteric (chiral nematic) layer (negative C-plate). Therefore, for this reason also, no combination of the cited references teaches or suggests the presently claimed invention or its advantages.

In view of the above, it is submitted that the rejections should be withdrawn.

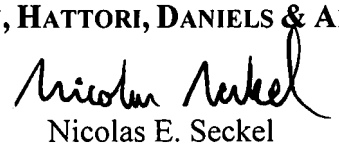
In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

If there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

If this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



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McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

Sixth Edition

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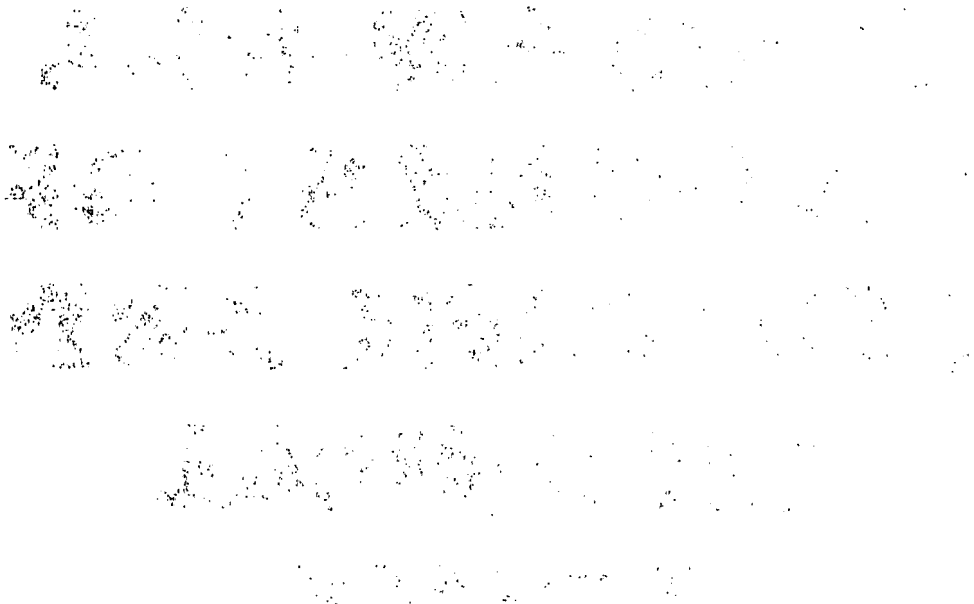
On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. ***(Image copyright © Dr. Luann Becker. Reproduced with permission.)***



Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Procaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology, White Sands Missile Range, New Mexico*, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Sixth Edition

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which may be considered as the parent substance of sterols, hormones, bile acids, and digitalis aglycons. { 'kō,lān }

cholangiogram [MED] The x-ray film produced by means of cholangiography. { kə'lan·jē·ə,gram }

cholangiography [MED] Roentgenography of the bile ducts. { kə,lan·jē'äg·rə·fē }

cholangiolitis [MED] Inflammation of the bile capillaries. { kə,lan·jē·ə'līd·əs }

cholangioma [MED] Adenocarcinoma of the bile ducts. { kə,lan·jē'ō·mə }

cholangitis [MED] Inflammation of the bile ducts. { ,kō·lən'jīd·əs }

cholate [BIOCHEM] Any salt of cholic acid. { 'kō,lāt }

cholecalciferol [PHARM] $C_{27}H_{44}O$ Colorless crystals with a melting range of 84–88°C; soluble in alcohol, chloroform, and fatty oils; derived from the vitamin D_3 of tuna liver oil and used as an antirachitic vitamin. Also known as vitamin D_3. { ,kō·lə,kal'sif·ə,rōl }

cholecystectomy [MED] Surgical removal of the gallbladder and cystic duct. { ,kō·lə,sis'tek·tə·mē }

cholecystitis [MED] Inflammation of the gallbladder. { ,kō·lə,sis'tīd·əs }

cholecystography [MED] Radiography of the gallbladder following injection or ingestion of a radiopaque substance excreted in bile. Also known as Graham-Cole test. { ,kō·lə,si'stäg·rə·fē }

cholecystokinin [BIOCHEM] A hormone produced by the mucosa of the upper intestine which stimulates contraction of the gallbladder. { ,kō·lə,sis·tə'kī·nən }

cholecystostomy [MED] The establishment of an opening into the gallbladder, usually for external drainage of its contents. { ,kō·lə,si'stä·stə·mē }

choledochoduodenal junction [ANAT] The point where the common bile duct enters the duodenum. { kō,lē,däk·ə,dü'wäd·ən·əl 'jəŋk·shən }

choledocholithiasis [MED] The presence of calculi in the common bile duct. { kō,lē,däk·ə,li'thī·ə·səs }

choledochostomy [MED] The draining of the common bile duct through the abdominal wall. { kō,lē,dä'kä·stə·mē }

choleglobin [BIOCHEM] Combined native protein (globin) and open-ring iron-porphyrin, which is bile pigment hemoglobin; a precursor of biliverdin. { kō,lē'glō·bən }

cholelithiasis [MED] The production of or the condition associated with gallstones in the gallbladder or bile ducts. { ,kō·lə,li'thī·ə·səs }

cholera [MED] **1.** An acute, infectious bacterial disease of humans caused by *Vibrio comma;* characterized by diarrhea, delirium, stupor, and coma. **2.** Any condition characterized by profuse vomiting and diarrhea. { 'käl·ə·rə }

cholera [MED] An acute, severe gastroenteritis. { 'käl·ə·rə }

cholera vibrio [MICROBIO] *Vibrio comma,* the bacterium that causes cholera. { 'käl·ə·rə 'vib·rē,ō }

cholerophobia [PSYCH] Abnormal fear of cholera. { ,käl·ə·rə'fō·bē·ə }

cholesteatoma [MED] An epidermal inclusion cyst of the middle ear, or mastoid bone, sometimes in the external ear canal, brain, or spinal cord. Also known as pearly tumor. { kə,les·tē·ə'tō·mə }

cholesteric material [PHYS CHEM] A liquid crystal material in which the elongated molecules are parallel to each other within the plane of a layer, but the direction of orientation is twisted slightly from layer to layer to form a helix through the layers. { kə'les·tə·rik mə'tir·ē·əl }

cholesteric phase [PHYS CHEM] A form of the nematic phase of a liquid crystal in which the molecules are spiral. { kə'les·tə·rik ,fāz }

cholesterol [BIOCHEM] $C_{27}H_{46}O$ A sterol produced by all vertebrate cells, particularly in the liver, skin, and intestine, and found most abundantly in nerve tissue. { kə'les·tə,rōl }

cholic acid [BIOCHEM] $C_{24}H_{40}O_5$ An unconjugated, crystalline bile acid. { 'kō·lik 'as·əd }

choline [BIOCHEM] $C_5H_{15}O_2N$ A basic hygroscopic substance constituting a vitamin of the B complex; used by most animals as a precursor of acetylcholine and a source of methyl groups. { 'kō,lēn }

choline acetyltransferase [BIOCHEM] An enzyme that transfers the acetyl group to choline in the synthesis of acetylcholine from acetyl coenzyme A and choline. { ¦kō,lēn ə,se·əl'tranz·fə,rās }

cholinergic [PHYSIO] Liberating, activated by, or resembling the physiologic action of acetylcholine. { ¦kō·lə¦nə jik }

cholinergic nerve [NUERO] Any nerve, such as autonomic preganglionic nerves and somatic motor nerves, that releases a cholinergic substance at its terminal points. { ¦kō·lə¦nə jik 'nərv }

cholinesterase [BIOCHEM] An enzyme found in blood and in various other tissues that catalyzes hydrolysis of choline esters, including acetylcholine. Abbreviated chE. { 'kō·lə'nes·tə,rās }

choline succinate dichloride dihydrate *See* succinylcholine chloride. { 'kō,lēn 'sək·sə,nāt di'klȯr,īd di'hī,drāt }

choluria [MED] The presence of bile in the urine. { kō'lu·rē·ə }

cholytaurine *See* taurocholic acid. { ,käl·ə'tó,rēn }

Chondrichthyes [VERT ZOO] A class of vertebrates comprising the cartilaginous, jawed fishes characterized by the absence of true bone. { kän'drik·thē,ēz }

chondrification [PHYSIO] Formation of or conversion into cartilage. { ,kän·drə·fə'kā·shən }

chondrin [BIOCHEM] A horny gelatinous protein substance obtainable from the collagen component of cartilage. { 'kän·drən }

chondrioid [MICROBIO] A cell organelle in bacteria that is functionally equivalent to the mitochondrion of eukaryotes. { 'kän·drē,ȯid }

chondriome [CYTOL] Referring collectively to the chondriosomes (mitochondria) of a cell as a functional unit. { 'kän·drē,ōm }

chondriosome [CYTOL] Any of a class of self-perpetuating lipoprotein complexes in the form of grains, rods, or threads in the cytoplasm of most cells; thought to function in cellular metabolism and secretion. { 'kän·drē·ə,sōm }

chondrite [GEOL] A stony meteorite containing chondrules. { 'kän,drīt }

chondroblast [HISTOL] A cell that produces cartilage. { 'kän·drō,blast }

Chondrobrachii [VERT ZOO] The equivalent name for Batoidei. { ¦kän·drō'brā·kē,ī }

chondroclast [HISTOL] A cell that absorbs cartilage. { 'kän·drō,klast }

chondrocranium [ANAT] The part of the adult cranium derived from the cartilaginous cranium. [EMBRYO] The cartilaginous, embryonic cranium of vertebrates. { ¦kän·drō'krā·nē·əm }

chondrocyte [HISTOL] A cartilage cell. { 'kän·drō,sīt }

chondrodendrin *See* bebeerine. { ¦kän·drō¦den·drən }

chondrodite [MINERAL] $Mg_5(SiO_4)_2(F,OH)_2$ A monoclinic mineral of the humite group; has a resinous luster, is yellow-red in color, and occurs in contact-metamorphosed dolomites. { 'kän·drō,dīt }

chondrodysplasia *See* enchondromatosis. { ¦kän·drō·dis'splā·zhə }

chondrodystrophy fetalis *See* achondroplasia. { ¦kän·drō¦dis·trə·fē fə'tal·əs }

chondrogenesis [EMBRYO] The development of cartilage. { ¦kän·drō·jə'nē·səs }

chondroitin [BIOCHEM] A nitrogenous polysaccharide occurring in cartilage in the form of condroitinsulfuric acid. { kän'drō·ə·tən }

chondrology [ANAT] The anatomical study of cartilage. { kän'dräl·ə·jē }

chondroma [MED] A benign tumor of bone, cartilage, or other tissue which simulates the structure of cartilage in its growth. { kän'drō·mə }

chondromalacia [MED] Softening of a cartilage. { ¦kän·drō·mə'lā·shə }

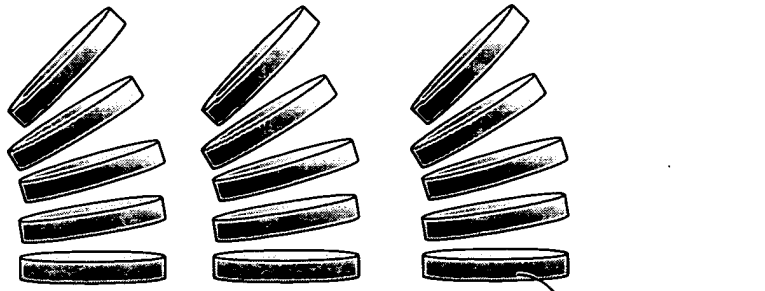
chondromucoid [BIOCHEM] A mucoid found in cartilage; a glycoprotein in which chondroitinsulfuric acid is the prosthetic group. { ¦kän·drō'myü,kȯid }

Chondromyces [MICROBIO] A genus of bacteria in the family Polyangiaceae; sporangia are stalked, and vegetative cells are short rods or spheres. { ,kän·drō'mī,sēz }

chondrophone [INV ZOO] In bivalve mollusks, a structur

Types of liquid crystals

Chiral discotic liquid crystal phase



Cholesteric liquid crystal phase